CLAIMS

1. A pharmaceutical composition in particulate form, suitable for oral administration, including a core containing eletriptan or a pharmaceutically acceptable salt thereof, the core being coated with a water-insoluble, permeable coating including one or more acrylic copolymer(s) containing trimethylammoniumethylmethacrylate groups, said composition being capable of achieving a sigmoidal pattern of controlled drug release.

2. The composition of claim 1, wherein the core contains eletriptan hydrobromide.

3. The composition of claim 1, wherein the core contains eletriptan hemisulphate.

4. The composition of claim 1, wherein the core is formed as a particle of eletriptan, or a pharmaceutically acceptable salt thereof, and optionally one or more extrusion aid(s), binder(s) or diluent(s).

5. The composition of claim 1, wherein the core is formed as a layer of eletriptan, or a pharmaceutically acceptable salt thereof, and, optionally, a binder on the surface of a seed.

6. The composition of claim 1, wherein the core has a diameter of from 0.2 to 2 mm.

7. The composition of claim 6, wherein the core has a diameter of from 0.5 to 1.4 mm.

8. The composition of claim 1, wherein the core contains from 10 to 90% w/w of eletriptan.

9. The composition of claim 8, wherein the core contains from 40 to 60% w/w of eletriptan.

10. The composition of claim 1, wherein the core includes eletriptan hydrobromide, microcrystalline cellulose and lactose.

11. The composition of claim 1, wherein the core includes eletriptan hemisulphate, a hydroxypropylmethylcellulose, a polyethylene glycol and a non-pareil seed.

12. The composition of claim 1, wherein the core includes eletriptan hemisulphate, talc and a non-pareil seed.

13. The composition of claim 1, wherein an additional protective layer is inserted between the core and the water-insoluble, permeable coating.

14. The composition of claim 13, wherein the additional protective layer includes a hydroxypropyl methylcellulose.

15. The composition of claim 1, wherein the acrylic copolymer(s) containing trimethylammoniumethylmethacrylate groups is/are selected from Eudragit RL™ and Eudragit RS™.

16. The composition of claim 15, wherein the acrylic copolymers are a mixture of 95:5, by weight, Eudragit RS™:Eudragit RL™.

17. The composition of claim 1, wherein the water-insoluble, permeable coating has a thickness of from 10 to 100 microns.

18. The composition of claim 17, wherein the water-insoluble, permeable coating has a thickness of from 40 to 80 microns.

19. The composition of claim 1, wherein the water-insoluble, permeable coating includes Eudragit RL™, Eudragit RS™, talc and triethyl citrate.

20. A pharmaceutical formulation including eletriptan or a pharmaceutically acceptable salt thereof and at least one other pharmaceutically acceptable component which is capable of delivering eletriptan, or a pharmaceutically acceptable salt thereof, with a sigmoidal controlled release profile, into an aqueous solution buffered at pH 7.5 wherein (a) 5% by weight of the drug is released at a time point from 1.5 to 12 hours following addition, (b) 50% by weight of the drug is released at a time point from 5 to 15 hours following addition and (c) 80% by weight of the drug is released at a time point from 6.5 to 20 hours following addition.

21. A pharmaceutical formulation including eletriptan or a pharmaceutically acceptable salt thereof and at least one other pharmaceutically acceptable component which is capable of delivering, at least in part by sigmoidal controlled drug release, a mean plasma concentration of eletriptan, in healthy volunteers, of greater than 10 ng/ml at 20 hours post-dosing whilst providing a peak mean plasma concentration of less than 100 ng/ml during the first 10 hours post-dosing.

22. The pharmaceutical formulation of claim 20 including one or more pharmaceutically acceptable excipient(s), diluent(s) or carrier(s).

23. The pharmaceutical formulation of claim 22, said formulation comprising a hard gelatine capsule.

24. The pharmaceutical formulation of claim 21 including one or more pharmaceutically acceptable excipient(s), diluent(s) or carrier(s).

25. The pharmaceutical formulation of claim 24, said formulation comprising a hard gelatine capsule.

26. A dual release formulation which includes a sigmoidal controlled release composition of claim 1, in combination with an immediate release composition of eletriptan, or a pharmaceutically acceptable salt thereof.

27. A method of treatment of a disease for which a 5-$HT_{1B/1D}$ receptor agonist is indicated in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the composition claim 1.

28. A method of treatment of a disease for which a 5-$HT_{1B/1D}$ receptor agonist is indicated in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 22.

29. A method of treatment of a disease for which a 5-$HT_{1B/1D}$ receptor agonist is indicated in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 23.

30. A method of treatment of a disease for which a 5-$HT_{1B/1D}$ receptor agonist is indicated in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 24.

31. A method of treatment of a disease for which a 5-$HT_{1B/1D}$ receptor agonist is indicated in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 25.

32. A method of (a) treatment of migraine or (b) prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the composition of claim 1.

33. A method of (a) treatment of migraine or (b) prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 22.

34. A method of (a) treatment of migraine or (b) prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 23.

35. A method of (a) treatment of migraine or (b) prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 24.

36. A method of (a) treatment of migraine or (b) prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of a therapeutically effective amount of the formulation of claim 25.

37. A method of treatment of migraine and prevention of migraine recurrence in a mammal, including a human, comprising administration to said mammal of an effective amount of the dual release formulation of claim 25.

38. A method of administering eletriptan or a pharmaceutically acceptable salt thereof, to a mammal, including a human, which comprises delivering eletriptan into an aqueous solution buffered at pH 7.5 wherein (a) 5% by weight of the drug is released at a time point from 1.5 to 12 hours following addition, (b) 50% by weight of the drug is released at a time point from 5 to 15 hours following addition and (c) 80% by weight of the drug is released at a time point from 6.5 to 20 hours following addition.

39. A method of administering eletriptan or a pharmaceutically acceptable salt thereof, to a mammal, including a human, which comprises delivering, at least in part by sigmoidal controlled drug release, a mean plasma concentration of eletriptan, in healthy volunteers, of greater than 10 ng/ml at 20 hours post-dosing while providing a peak mean plasma concentration of less than 100 ng/ml during the first 10 hours post-dosing.

40. A sigmoidal controlled release pharmaceutical composition containing eletriptan or a pharmaceutically acceptable salt thereof.

41. A process for the preparation of a particulate composition of claim 1, comprising (a) forming a core containing eletriptan, or a pharmaceutically acceptable salt thereof and (b) coating the core with a water-insoluble, permeable coating comprising one or more acrylic copolymer(s) containing trimethylammoniumethylmethacrylate groups.

42. A process for the preparation of a particulate composition of claim 1, comprising (a) forming a core by layering eletriptan, or a pharmaceutically acceptable salt thereof, and, optionally, a pharmaceutically acceptable binder onto the surface of a pharmaceutically acceptable seed and (b) coating the core with a water-insoluble, permeable coating comprising one or more acrylic copolymer(s) containing trimethylammonium-ethylmethacrylate groups.